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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/622,353	09/12/2000	John A. Arbuckle	0457-PCT-US	4766

7590

03/18/2002

David B Ran
7100 N W 62nd Avenue
Darwin Building
Johnston, IA 50131

EXAMINER

TUNG, JOYCE

ART UNIT

PAPER NUMBER

1637

DATE MAILED: 03/18/2002

9

Please find below and/or attached an Office communication concerning this application or proceeding.

Advisory Action

Application No.
09/622,353

Applicant(s)

Arbuckle et al.

Examiner

Joyce Tung

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED Jan 28, 2002 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

Therefore, further action by the applicant is required to avoid the abandonment of this application. A proper reply to a final rejection under 37 CFR 1.113 may only be either: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114.

THE PERIOD FOR REPLY [check only a) or b)]

- a) ☒ The period for reply expires 3 months from the mailing date of the final rejection.
- b) ☐ In view of the early submission of the proposed reply (within two months as set forth in MPEP § 706.07 (f)), the period for reply expires on the mailing date of this Advisory Action, OR continues to run from the mailing date of the final rejection, whichever is later. In no event, however, will the statutory period for the reply expire later than SIX MONTHS from the mailing date of the final rejection.

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

1. ☐ A Notice of Appeal was filed on _____. Appellant's Brief must be filed within the period set forth in 37 CFR 1.192(a), or any extension thereof (37 CFR 1.191(d)), to avoid dismissal of the appeal.
2. ☐ The proposed amendment(s) will be entered upon the timely submission of a Notice of Appeal and Appeal Brief with requisite fees.
3. ☒ The proposed amendment(s) will not be entered because:
- (a) ☒ they raise new issues that would require further consideration and/or search. (See NOTE below);
- (b) ☐ they raise the issue of new matter. (See NOTE below);
- (c) ☐ they are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
- (d) ☐ they present additional claims without cancelling a corresponding number of finally rejected claims.

NOTE: Please see the attached.

4. ☐ Applicant's reply has overcome the following rejection(s):

5. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment cancelling the non-allowable claim(s).

6. ☒ The a) ☐ affidavit, b) ☐ exhibit, or c) ☒ request for reconsideration has been considered but does NOT place the application in condition for allowance because:
Please see the attached.

7. ☐ The affidavit or exhibit will NOT be considered because it is not directed SOLELY to issues which were newly raised by the Examiner in the final rejection.

8. ☒ For purposes of Appeal, the status of the claim(s) is as follows (see attached written explanation, if any):

Claim(s) allowed: _____

Claim(s) objected to: _____

Claim(s) rejected: claims 1-21

9. ☐ The proposed drawing correction filed on _____ a) ☐ has b) ☐ has not been approved by the Examiner.

10. ☐ Note the attached Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____

11. ☐ Other:

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1. The amendment filed 1/28/2002 has not been entered because the newly added language raises new issues that would require further consideration and/or search. The amended language will require new search on the limitations of claims 9 and 17.
2. Regarding the rejection of claims 1, 4-8, 10-13, 15-16 and 18-21 under 35 U.S.C. §103(a) over Straus et al. in view of Lindemann et al., Walbot et al. and Briggs et al., Applicant argues that Straus et al. teach a method of genomic subtraction for cloning DNA corresponding to deletion mutations, while the claimed invention relates to methods involving genomic insertions in which the genomic DNA of each organism comprises at least one copy of said transposable element. However, the steps of instant invention have the steps of the method of Straus et al.. Actually, the method of Straus et al. has the same steps of using the adapters prior to isolation procedure as claimed (See claims 1, steps a)-e) and claim 15, steps a)-c) and See pg 1889 of the references, the Abstract).

Applicants also argue that in the claimed invention in claim 15, the method is directed to identifying the location of a transgene insertion. It is unclear how the location of a transgene insertion is identified based upon the claim language.

Applicants further argue the reference of Lindemann et al. do not teach or suggest the method is applicable to the populations employed in the claimed invention where transposable elements are present in both sample and control population. However, it is unclear what transposable elements are encompassed and in addition Lindemann et al. disclose involving two polynucleotide populations fragmented (as recited in claims 1, 15, and 20) which are attached an

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oligonucleotide comprising nested primer binding sites or the complements thereof in which the primer binding sites comprising an outermost primer binding site, an innermost primer binding site and at least one more internal primer binding site between to produce marked sample and control sample (See column 10, lines 26-48). The teachings of Lindemann et al. suggest that the primer is nested as recited in step (e) of claim 1 and step (d) of claim 15 and the oligonucleotide of Lindemann et al. has the same function as the recited adapter in steps (d)-(e) of claim 1 and steps (c)-(d) of claim 15 and claim 10.

Applicants further argue that there is no motivation to combine the references. As indicated in the Office action mailed 6/21/2001, the motivation is that the method of Straus et al. involves genomic subtraction which can be used to efficiently isolate the DNA that is absent in a yeast deletion mutant (See pg. 1889, column 1, third paragraph), the method of Lindemann et al. overcomes the disadvantage in the method of use fewer PCR cycles, nuclease digestion before amplification and a single adapter designed for use with multiple primers (See column 5, lines 52-55). Walbot et al. disclose the probe to analyze *Mu* copy number in the *Mu* elements (See pg. 28, column 1, first paragraph) contains internal fragment of *Mu*1 and *Hind* III fragment is used as a probe and is in the terminal inverted repeat sequence of characteristic of *Mu* elements in active lines (See pg. 27, column 2, second paragraph). The method of Briggs et al. is the development of a rapid, inexpensive method for determining the function of a gene of known sequence (See column 3, lines 15-19) involving a primer complementary to the TIP sequence of the transposable element (See column 6, lines 7-13).

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Thus applicant's arguments filed 2/14/2002 fully considered but they are not persuasive and the rejection is maintained.

3. Claims 1, 4-8, 10-13, 15-16 and 18-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Straus et al. (Proc. Natl. Acad. Sci. USA, 1990, Vol. 87, pg. 1889-1893) in view of Lindemann et al. (5,958,738), Walbot et al. (Mol. Gen. Genet., 1988, Vol, 211, pg. 27-34) and Briggs et al. (5,962,764).

4. The rejection of claims 2-3 and 14 are maintained with the same reasons as set forth in the final rejection mailed 12/04/2001.

5. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Straus et al. (Proc. Natl. Acad. Sci. USA, 1990, Vol. 87, pg. 1889-1893) in view of Lindemann et al. (5,958,738), Walbot et al. (Mol. Gen. Genet., 1988, Vol, 211, pg. 27-34) and Briggs et al. (5,962,764) as applied to claims 1, 4-8, 10-13, 15-16 and 18-21 above, and further in view of Grunder et al. (J. of Hypertension, 1997, Vol. 15(2), pg. 173-179).

6. Claims 3 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Straus et al. (Proc. Natl. Acad. Sci. USA, 1990, Vol. 87, pg. 1889-1893) in view of Lindemann et al. (5,958,738), Walbot et al. (Mol. Gen. Genet., 1988, Vol, 211, pg. 27-34) and Briggs et al. (5,962,764) as applied to claims 1, 4-8, 10-13, 15-16 and 18-21 above, and further in view of Halverson et al. (5,707,809).

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7. Any inquiries concerning this communication or earlier communications from the examiner should be directed to Joyce Tung whose telephone number is (703) 305-7112. The examiner can normally be reached on Monday-Friday from 8:00 AM-4:30 PM.

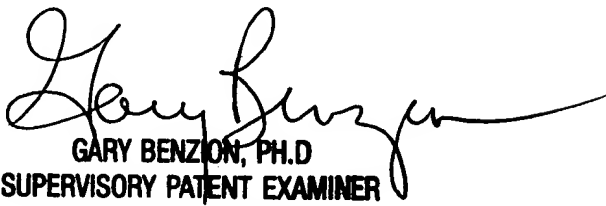
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gary Benzion can be reached at (703) 308-1119 on Monday-Friday from 10:00 AM-6:00 PM.

Any inquiries of a general nature or relating to the status of this application should be directed to the Chemical/Matrix receptionist whose telephone number is (703) 308-0196.

8. Papers related to this application may be submitted to Group 1600 by facsimile transmission. Papers should be faxed to Art Unit 1656 via the PTO Fax Center located in Crystal Mall 1 using (703) 305-3014 or 308-4242. The faxing of such papers must conform with the notice published in the Official Gazette, 1096 OG 30 (November 15, 1989).

Joyce Tung

March 12, 2002


GARY BENZION, PH.D
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1600